



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/867,685	05/31/2001	Susumu Takahashi	20-115	7220

7590 10/22/2004
Arnold International
P.O. Box 129
Great Falls, VA 22066-0129

EXAMINER

PATEL, NITIN

ART UNIT PAPER NUMBER

2673

DATE MAILED: 10/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/867,685

Applicant(s)

TAKAHASHI, SUSUMU

Examiner

Nitin Patel

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5,11,17,21 and 27 is/are rejected.
- 7) ☒ Claim(s) 2,3,18 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,5,17,21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mashitani et al., (U.S. patent No. 6,710,920) in view of Karasawa (U.S. Patent No. 6,040,945).

As per claims 1,17 Mashitani shows a display means that displays left and right images at respective left and right position on a display panel (In Fig.9 left and right of a viewer), the left and right images being partially overlapped on the display panel (In fig.9 element 2 which includes lens that overlapped as shown in shaded area and in col.11 lines 40-47); a optical system having left and right optical viewing systems with respective optical axes that are aligned substantially parallel with one other (In fig.9 element 2 with two plates parallel to each other), the left optical viewing system having an exit pupil and an effective aperture that includes the optical axis of the right optical viewing system, and the right optical viewing system having an exit pupil and an effective aperture that includes the optical axis of the left optical viewing system; wherein of the left and right images

Art Unit: 2673

displayed on the display panel only the left images are viewable at the left exit pupil and only the right images are viewable at the right exit pupil (in col. 11 lines 25-67). Kleinberger does not show a magnifying optical system. Karasawa shows an optical magnifying system (in fig. 1a and in col. 3 lines 40-50). It would have been obvious to one of ordinary skill in the art, at the time of the invention was made to allow the teaching of Karasawa's into system of Kleinberger's because it would have magnifying image to a virtual image to be observed with one of the eyes of the user.

As per claims 5, 21 Mashitani shows the distance between the pupils is adjustable by changing the distance between the left and right viewing system which changes the distance between the left and right images (in col. 11 lines 5-24).

3. Claims 11, 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mashitani et al., (U.S. patent No. 6,710,920) in view of Mitamura (U.S. Patent No. 6,646,805).

Mashitani shows a display means that displays left and right images at respective left and right position on a display panel (in Fig. 9 left and right of a viewer), the left and right images being partially overlapped on the display panel (in fig. 9 element 2 which includes lens that overlapped as shown in shaded area and in col. 11 lines 40-47); a optical system having left and right optical viewing systems with respective optical axes that are aligned substantially parallel with one other (in fig. 9 element 2 with two plates parallel to each other), the left optical viewing system having an exit pupil and an effective aperture that

Art Unit: 2673

includes the optical axis of the right optical viewing system, and the right optical viewing system having an exit pupil and an effective aperture that includes the optical axis of the left optical viewing system; wherein of the left and right images displayed on the display panel only the left images are viewable at the left exit pupil and only the right images are viewable at the right exit pupil (in col. 11 lines 25-67).

Mashitani does not show the left and right optical viewing having different polarization and different wavelength. Mitamura shows the left and right optical viewing having different polarization and different wavelength (in col. 19 lines 30-49). It would have been obvious to one of ordinary skill in the art, at the time of the invention was made to allow the teaching of Mitamura's into display system of Mashitani's because it would have controlled wavelength dispersion slope independently.

Allowable Subject Matter

4. Claims 2,3,18,19 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art fails to teach or suggest the left and right images have polarization which are independent of each other and the left and right optical viewing system of the optical magnifying system have polarizations which are independent of each other; the polarization of the right images is the same as the polarization of the right viewing system and the polarization of the left image is

Art Unit: 2673

the same as the polarization of the left viewing system as claimed in claims 2 and 18.

The prior art fails to teach or suggest the display means display the left and right images alternately on the display panel in a time multiplexed manner and the display of the left and right images is synchronized with a switching operation between the left and right optical viewing systems so that the right optical system forms only right images and the left optical viewing system forms only left images as claimed in claims 3 and 19.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nitin Patel whose telephone number is 703-308-7024. The examiner can normally be reached on 8:00-5:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin H Shalwala can be reached on 703-305-4938. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2673

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NP

October 18, 2004



BIPIN SHALWALA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600